Abstract: Feminist demands for attention to women’s experiences suggest that empiricism can be a promising resource for developing a feminist account of knowledge. Feminist empiricists seek to know the world around them, grounding their methodologies in what their senses can identify and what their methods can measure. It is the justificatory policy that has been used mostly by researchers in biology and the social sciences. Feminist empiricism makes the allied claim that scientific method is not effective at eliminating social biases that are as wide spread as androcentrism. Feminist empiricists claim that sexism and androcentrism in scientific inquiry are entirely the consequence of badly done science. Sexist and androcentric distortions in the results of research in biology and the social sciences are caused by social biases. Harding describes feminist empiricism as an attempt to resolve the sexism and androcentrism of current science by arguing that these are “social biases correctable by stricter adherence to the existing methodological norms of scientific inquiry”. In this paper I will discuss what feminist empiricism is and what are the views of Sandra Harding regarding feminist empiricism? And I will discuss contextual empiricism and naturalized empiricism. Furthermore, I will discuss what the limitations of empiricism were.

Keywords: Androcentrism, empiricism and sexism

Introduction: Feminist empiricism appeals in various ways on the philosophical tradition of Empiricism which states to the position and belief that the only knowledge source available to us is that which can be practiced and measured by our senses (Biber & Leavy, 2007, p. 27). Biber points out that experience involves appointment with nature, empiricism seems to capture well the sort of knowledge pursued by science (Biber, 2007, p. 29). Feminist empiricists try to find to understand the world around them, basis their methodologies in what their senses can know and what their methods can measure. As per positivists, feminist empiricists need to develop knowledge that is unbiased and truthful; they trust strongly such knowledge is attainable.

According to Biber empiricists stress totally the role of sensory experience in knowledge and give a lower profile the role of innate ideas and inborn mental abilities that “rationalists” champion. The role of sensory evidence is also fundamental to contemporary philosophy of science and so feminists often turn to empiricist epistemologies when they stare for resources in the philosophical canon to account for observations of sexism in science.
Feminist empiricism is the justificatory policy that has been used mainly by researchers in biology and the social sciences. Feminist empiricists argue that sexism and androcentrism in scientific inquiry are entirely the consequence of badly done science. Sexist and androcentric distortions in the results of research in biology and the social sciences are caused by social biases. These prejudices are the result of hostile attitudes and false beliefs due to superstitions, and ignorance. Nicholson is of the view Androcentric biases enter the research process particularly at the stage when scientific problems are identified and defined, and when concepts and hypotheses are formulated (Nicholson, 1990, p.90). Feminist empiricists argue that sexism and all other biases can be eradicated from science if researchers would follow strictly to the prevailing methodologies of science (Biber and yaiser, 2004, p.9).

Feminist empiricism makes the allied claim that scientific method is not effective at eliminating social biases that are as widespread as androcentrism. Traditional empiricism holds that scientific method will eliminate any social biases as a hypothesis goes through its severe tests. But feminist empiricism argues that an androcentric picture of nature and social life occurs from the testing by men only of hypotheses generated by what men find problematic in the world around them. The problem here is not only that the hypotheses which would most intensely challenge androcentric beliefs are absent from those substitutes sexists consider when testing their preferred hypotheses. It is also that traditional empiricism does not direct researchers to locate themselves in the same critical plane as their subject matters. Therefore, when non-feminist researchers gather evidence for or against hypotheses, ‘scientific method’ bereft of such a directive is significant to locate and eradicate the androcentrism that shapes the research process (Kemp & Squires, 1997, p.167).

**Sandra Harding’s views about Empiricism:**

Sandra Harding differentiates and endorsed “standpoint feminism” over “feminist empiricism,” which she described as the view that instances of male bias are merely cases of ‘bad science’ that could be eliminated if scientists more rigorously adhered empiricist methods and norms for scientific research. She holds that feminist empiricism is empiricist in that empirical success is held to be an essential condition for accepting scientific theories, models, or auxiliary hypotheses as justified. Theories must be empirically fruitful when tested in conjunction with auxiliary hypothesis that do not already assume the truth of the hypothesis being tested (Intemann, 2010, p. 2).

Now at the same time, few tenets of current feminist empiricism distinguish it from the view originally formulated by Harding. Firstly, feminist empiricism is contextualist in that it takes the justification of scientific theories to occur within a particular set of suppositions, including assumptions about the aims of the research, suitable methodology, and criteria for theory choice. Feminist empiricism deny that there is one set of criteria for theory choice, or cognitive values are those characteristics of theories and models that supports the cognitive aims of research, which may vary depending on the research context. In other words, feminist empiricists deny that there is one fixed set of aims that is constitutive of all science.
Some research may aim to uncover natural laws, and other research may be concerned primarily with generating predictions that will save human lives. Because the aims of science depend on the research context, the methods and criteria for theory choice that promote those aims may also vary.

Secondly feminist empiricism is normative in that aims cognitive values, and other background assumptions of a research context can depend on social, ethical or political values. Because theories are tested in conjunction with a host of auxiliary assumptions, there is nothing to eliminate the idiosyncratic values of individual scientists from operating as those assumptions, sometimes implicitly or unconsciously (Ibid, p. 4).

Feminist empiricists discard traditional dichotomies that have constituted the “value-free” view of science including the context of discovery context of justification distinction, the fact value distinction and the traditional distinction between cognitive and social values. Whether a theory meets cognitive criteria better than alternatives depends on the range of hypotheses considered. Thus, idiosyncratic values that limit or influence the hypotheses considered will have implications for the context of justification. Moreover, the justification, interpretation, and adjudication of cognitive values can depend on social values. Finally, because scientific theories can be tested in conjunction with value-laden background assumptions, their status as “fact” rests partly on whether any value judgments operating as background assumptions are themselves justified. As a result, it is misleading to think that science deals with “fact” as opposed to “values”.

Thirdly, contemporary feminist empiricism is a social epistemology, because theory justification depends on a host of background assumptions of which individual scientists are often unaware, including ethical and political values, it is not always possible for individual scientist to identify their own biases. Because of this reason feminist empiricists take the locus of objectivity and justification to be scientific communities rather than individuals. Although individual scientists may not be able to identify their own idiosyncratic values from framing research questions, operating as background assumptions, scientific communities as a whole can achieve a higher degree of objectivity to the extent that they are structured in ways to help minimize the negative effects of such biases (Ibid, p. 5).

Therefore, feminist empiricists have made prescriptions aimed at increasing the objectivity of scientific communities and stopping or reducing individual biases. Longino argues that it is simpler to recognize when idiosyncratic values are influencing scientific reasoning or methodology when the values in question are different from one’s own. Thus, a scientific community comprised of individuals with diverse values and interests will be more likely to identify the ways that values influence the reasoning of individual scientists (Ibid, p. 6).

Harding defines feminist empiricism as an effort to resolve the sexism and androcentrism of current science by arguing that these are “social biases correctable by stricter adherence to the existing methodological norms of scientific inquiry”.

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Feminist empiricism is envisioned to explain the epistemic virtues of politically informed research while following to a methodology which needs value-neutrality. Harding does not reject feminist empiricism entirely, but for her its virtues mainly reside in the fact that “it is effective at explaining the successes of feminist inspired research to certain important audiences for this work”. Feminist empiricism is of two types, contextual empiricism by Helen Longino and naturalist empiricism by Lynn Nelson (Tanesini, 1999, p. 97).

**Contextual Empiricism:**

Longino’s contextual empiricism is a modification of the Hempel-Nagel model of the confirmation of scientific theories on the basis of a capable subscription of the two Quinean theses. She agrees that ‘some data may only be perceived in the context of examining some hypothesis. By following Mary Hesse Longino claims that, although there is no theory-neutral language of observations, it does not follow that observations cannot be used as free tests of theories. She points out that there will be some commonality between followers of diverse theories and that the theory which notifies the meanings of the terms used to describe a given observation might not be the alike as that for which the observation is a test (bid, p. 99).

In order to reject the traditional empiricist belief that good science is autonomous from politics, Longino supports the empiricist view that science is about framing hypotheses which must be tested against experience. However Longino does not claim that empirical scientific method is sufficient to eradicate oppressive political values from the fabric of science. She contends that scientific knowledge is produced through practices carried out primarily by communities of scientists, that background suppositions are always at work in scientific reasoning from evidence to hypotheses, models and theories and that values and interests including assumptions about gender can and often do function as background assumptions (Potter, 2006, p. 98).

Longino considers contextual empiricism to be a form of empiricism in that it treats experience as the basis of knowledge claims in the sciences. The term ‘contextual’ in Longino’s work, refers to three views of context, the context of particular background assumptions, the context of scientific communities, and the social and cultural context of science. The first view of context is engaged in her well-known argument that epistemic justification is comparative to background assumptions because such suppositions are needed to found the relevance of empirical evidence to a hypothesis. The second belief of context is employed in her analysis of objectivity, in which she argues that the objectivity of scientific knowledge is a function of a community’s exercise rather than an individual scientist’s observations and reasoning. The third belief of context is engaged in her analysis of the role of morals in science, in which she argues that values belonging to the social and cultural context of science can enter into epistemic justification through background assumptions. Longino says that background assumptions are essential in scientific reasoning because a perceived state of affairs in itself does not tell for what hypothesis it can be taken as evidence (Grasswick, 2011, p. 26).
Longinois of the view, epistemic justification is relative to a context of background suppositions. The thesis of contextual evidence indicates that moral and social values can enter into epistemic justification indirectly, by influencing what background assumptions scientists depend on in their evidential reasoning. Longino describes, ‘contextual values, interests and value-laden suppositions can constrain scientific practice in such a way as to affect the results of inquiry and do so without violating constitutive rules of science’ (Ibid, p. 28).

**Naturalized Empiricism:**

Nelson’s version of science is influenced by Quine’s version of empiricism in science and of naturalism in epistemology. Similar to Quine Nelson discards the separation between analytic truths, which are true in virtue of meaning, and synthetic truths which are true in virtue of facts. Instead she holds that every truth is true because of both how the world is and what the words we use mean. Nelson also rejects the view that statements taken individually can be certain by empirical evidence. She claims instead that entire theories, rather than individual statements are confirmed or disconfirmed by experience (Tanesini, 1999, p. 101).

In Nelson’s explanation evidence is communal and she also claims that, since knowledge always needs an appeal to communal standards of evidence, the suitable subjects of knowledge are communities. Individuals have knowledge only in a derivative sense. Nelson’s claims that both evidence and standards of evidence are communal are not altogether clear. She is of the view that evidence is communal because experiences are theory-laden. The theory-ladenness of experiences indicates, contra traditional Lockean empiricism, that ‘sensory experiences are not, and cannot be foundational’ (Ibid, p. 104).

Nelson is more laborious than Quine was about the implications of holism and of the coherence theory of evidence. Quine claimed that there is no strident margin between common-sense theories and beliefs and scientific theories and beliefs with one important exception: he believed in a strong boundary between science and non-constitutive values. This is because he thought that moral, social, and other such values are not subject to empirical control. Nelson argues, to the contradictory, that sociopolitical claims and non-constitutive values occasionally support constitutive evidence in good science. Thus she frames the coherence theory of evidence as feminist account of evidence, according to which the theories that, along with our experiences, constitute evidence contain values and socio-political theories (Potter, 2006, p. 35).

Helen Longino states that “feminism is about the expansion of human potentiality”. Such a development of human potentiality was impossible while women were not included in both the subject matter and the processes of knowledge building. In the early 20th century, women researchers began to recognize and fight against the systematic and pervasive elimination of women and women’s experiences from research questions and samples. They have exposed how traditional positivism’s androcentric biases were and are built into positivism, leaving us with subjective
rather than objective knowledge about our world. Committing to develop knowledge that profits the lives of women, perfectly represents their experiences, and sheds light on the truth of human realities. They argue that science as an entire should goal for and attain a well, more objective study, where the research process is more complex and factual when the political, social, and cultural consequences of the research are taken into consideration (Biber & Leavy, 2007, p. 29).

**Limitations of Empiricism:**

Biber is of the view scientific knowledge is usually considered the best of human empirical investigation, yet it can look insufficient in light of a number of clearly defined case studies of gender bias in institutionalized science. Cellular biologists have uniformly defined the egg in passive and the sperm in active terms and preserved gender ideology through various other forms of description. Feminists refusal of empiricism tends to stress on how logical empiricists isolated scientific value from political concerns. Kathleen Okruhlik explains that one of the founding and most important members of the renowned “Vienna Circle” was Otto Neurath, who preserved the necessity of conative as well as perceptive aspects of science. While Neurath considered ethical and sociopolitical deliberations to be immune from rational scrutiny, he believed that such “auxiliary” motives must play a role in even the greatest science. This admission recommends a possibility fruitful unity between feminists and the frequently reviled logical empiricists (Biber, 2007, p. 31)

Neurath recognized the necessity for conative values because he believed what is now known as “the undetermination thesis.” Underdetermination describes why the activity of the egg wasn’t perceived until women entered molecular biology. In this situation, the observations themselves are beliefs about the world that were diverse for the earlier men than for the later women, although based on essentially the same sensory data. In addition, however, greater, consciously developed, and thoroughly scrutinized theoretical beliefs are equally subject to underdetermination, which helps feminists to describe how sexism takes diverse forms in science. Thus biology suggests more shocking cases of underdetermination and more challenging grist for the mill of feminist empiricism. Similarly, politics has more direct influence on the content of claims from the life sciences than from the physical sciences, for which underdetermination has less clear political implications (Ibid, p. 33).

The scientific evidence regarding human examination may turn out to support a non-empiricist opinion of knowledge, to make available “honestly novel and transformative philosophical policies”, which define how bias can play a positive role in reasoning. Indeed, some evidence does support the view that people have innate intellectual abilities, such as for language and that in this way what people can know is independent of their past experience. Therefore empiricism may not follow from naturalism and as Louise Antony argues, what follows may be rationalism. The classic rationalist epistemology of Rene Descartes recommends that the mind involves innate structures that guide what people gain from the world. These ways are productive because of the need to order the confused input from our senses.
Boundaries in perspective are understood as methods of bias by Antony, which she claims makes sense of how some sociopolitical prejudices may be epistemologically desirable to others (Ibid, p. 41).

**Conclusion:**

I came to the conclusion that feminist empiricists are hardly monolithic in their epistemology and methodology, but they have had a growing impact on the positivist paradigm. They critique positivist science from within, arguing and pushing for a stronger, better, more objective knowledge that can be gained when thorough assessment of the political and discursive context of knowledge building is part of the research procedure. Their argument is that the world is knowable, that truth can be found, and that much of science has built blinders that obscure the rich and colorful context of knowledge processes and reality, serving to upload and make stronger the positivist paradigm and masculine constructions of the status quo.

Feminist empiricism copies a unification of post-positivist realism and liberal feminism. Because neither of its tradition calls for structural transformations in either science or society, this epistemological structure emphasis on how to build our theories of knowledge less disposed to gender bias. Feminist empiricism is founded on the ontological supposition that a real, objective world does exist; therefore, the purpose of the scientists is to capture and explain that social world in such a way that does not copy gender biases.

The argumentation of feminist empiricist’s is that scientific knowledge is contextual and socially located. In addition, feminist empiricism is normative because it upholds the aims of science and resulting cognitive values can themselves depend on social, ethical and political values. Feminist empiricists rejects traditional dichotomies that have represented the ‘value-free’ view of science, as well as the context of discovery, context of justification and the traditional distinction among cognitive and social values.

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